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IN THE

Supreme Court of the United States

OCTOBER TERM, 1971

No. 71-503

RICHARD T. WHITCOMB,

Petitioner,

v.

GENERAL DYNAMICS CORPORATION and AMERICAN AIRLINES, INC.,

Respondents.

RESPONDENTS' BRIEF IN OPPOSITION TO PETITION FOR WRIT OF CERTIORARI

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November 10, 1971

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There is nothing about these ordinary patent cases which warrants review by this Court.

The decision of the Court of Appeals for the Fourth Circuit, holding petitioner's patent relating to aerodynamic antishock bodies not infringed, is manifestly right. There is no conflict between decisions of Courts of Appeals on the matter. No question of public importance is involved. And there has been no departure from the usual and accepted course of judicial proceedings. In short, there is no special or important reason for granting a writ of certiorari in these cases.

Opinions Below

The opinion of the Court of Appeals for the Fourth Circuit is reported at 443 F. 2d 630. The District Court

for the Eastern District of Virginia did not write an opinion, electing instead to adopt findings of fact and conclusions of law substantially in the form submitted by petitioner. They are reported at F. Supp. ; 164 USPQ 610.

Both the opinion of the Court of Appeals and the findings of fact and conclusions of law of the District Court are printed in petitioner's separate thirty-eight page appendix to the petition.*

Jurisdiction

The jurisdiction requisites are set forth in the petition.

Questions Presented

Petitioner's two "questions presented" are so framed that they create the erroneous impression that in finding petitioner's patent not infringed by respondents' accused devices, the Court of Appeals paid no attention to the claims of the patent in suit.

Question 1 suggests that the Court, without regard for the patent claims, made a finding of non-equivalents even though respondents' accused devices performed substantially the same function, in the same manner and for the same purpose, to achieve substantially the same result as the patented device.

Question 2 states that the Court completely ignored the patent claims, and instead based its finding of non-infringement solely upon a comparison between the accused devices

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*Cited thus: "(A. 29)" refers to page 29 of the appendix to the petition. "(Whitcomb, 214a)" refers to the testimony of the witness Whitcomb at page 214a in appellant's appendix before the Court of Appeals. Petitioner Whitcomb's exhibits are referred to as "W-" and respondents' exhibits are referred to as "GD-".

and the patentee's research investigations extraneous to the patent in suit.

Even the most casual inspection of the Court of Appeals' Opinion demonstrates that these questions find no premise there. Addressing itself to the infringement question, the very first thing the Court of Appeals said was (A. 29):

> "The issue of infringement turns on the wording of claim 1 of Whitcomb's patent."

Then the Court went on to find non-infringement for the perfectly straightforward and unassailable reason that the accused devices do not correspond to the language of the claims in the patent in suit.

Here there can be no question but that non-infringement was determined by application of the proper and well-established legal standard. The only possible question presented here is whether or not petitioner, defeated below, is entitled in this Court to another hearing on the merits with respect to the non-infringement of his patent. Clearly he is not, *Magnum Co.* v. *Coty*, 262 U. S. 159, 163 (1923):

> "The jurisdiction [to bring up cases by certiorari] was not conferred upon this Court merely to give the defeated party in the Circuit Court of Appeals another hearing."

Statement of the Case

Petitioner's "Statement of the Case" never states the case. It is not until page 19 of his petition that he finally reaches the question of whether or not respondents' accused device is within the claims of the Whitcomb patent in suit. And tucked away on page 24 of petitioner's 28 page petition is the only mention of the dispositive fact that the accused devices are outside the scope of the claims by the

comfortable margin of 4 feet. Some clarification is appropriate.

Whitcomb patent 2,967,030 in suit relates to aerodynamic "antishock bodies", one of a number of different arrangements intended to diminish the adverse effects of an air flow phenomenon known as boundary-layer separation. As an airplane flies, air displaced by its wing flows over the wing's upper surface at speeds relatively faster than the speed of the airplane itself. When the airplane travels at "transonic speeds", i.e., speeds near but below the speed of sound, the air passing over the wing equals or exceeds the speed of sound.

The transition from subsonic to supersonic flow creates a sharp pressure change known as a "shock wave", which in turn causes the air adjacent to the wing to become turbulent and to lift away from the wing, a condition called "boundary-layer separation". The shock wave and its associated boundary-layer separation greatly increase the "drag" imposed on the airplane, and the drag acts as a speed barrier making it impossible to increase the speed of the airplane further without inordinate expenditures of power.

The antishock bodies of the Whitcomb patent in suit, like vortex generators and swept-back wings before them, are intended to control both shock wave and boundary-layer separation so as to delay the onset of drag at high subsonic speeds, and thus enable an airplane equipped with them to reach higher speeds before experiencing a substantial drag rise.* Whitcomb's antishock bodies are

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*Vortex generators (small curved metal veins standing about two inches high on the upper surface of an airplane's wing) and swept-back wings were admitted by Whitcomb to have been "very useful" and widely used to control boundary-layer separation and resultant drag before his alleged invention (Whitcomb, 281a-284a). The Boeing 707, for example, successfully uses both swept-back wings and vortex generators (Whitcomb, 283a).

shown and described in the patent as generally cylindrical bodies, tapering to a point at each end, and mounted on the upper surface of the airplane's wing parallel to the fuselage.

The patent states that the noses of the antishock bodies must be located near or "just ahead of" the region of maximum thickness of the aircraft's wing, and every claim specifies that the antishock body be positioned so that its tapered forward region is extending "just forward" of the wing panel region of maximum thickness (A. 36).

As Whitcomb admitted, the accused antishock bodies on General Dynamics' Convair 990 airplanes* are positioned so that their noses are 4 feet forward of the wing panel region of maximum thickness (Whitcomb, 214a)—forward by over half of the 7.4 foot distance from the point of maximum thickness to the leading edge of the wing (Whitcomb, 192a).

The dispositive question in this case is whether the accused antishock bodies, with noses 4 feet forward of the point of maximum thickness of the wing, infringe patent claims which require that they be "just forward" of that point. The Court of Appeals, answering that question in the negative, held that the claims were not infringed.

After stating that "the issue of infringement turns on the wording of claim 1 of the Whitcomb patent" (A. 29), the Court of Appeals quoted claim 1 in its entirety, underscoring the following phrase which positioned the antishock body's nose as:

> ". . . extending just forward of the wing panel region of maximum thickness . . ."

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*Each 990 has an inboard and outboard pair of antishock bodies. The inboard pair have their noses well behind the wing panel region of maximum thickness, and accordingly are not accused as infringements (Whitcomb, 294a). This controversy involves only the outboard pair of antishock bodies.

The Court of Appeals then said (A. 29-A. 30):

> "In contrast to the portion of claim 1 emphasized above, the challenged General Dynamics wing bodies extend four feet forward of the region of maximum thickness—53% of the distance from that region to the leading edge of the wing.
>
> ". . . If we are to give any substantive content to the phrase 'just forward' as distinct from any other type of 'forward', it must mean 'slightly forward' or 'barely forward' of the region of maximum thickness. In our view no permissible reading of the phrase 'just forward' can encompass the extension of wing bodies four feet forward; the General Dynamics wing bodies extend too far toward the leading edge of the wing to fit the explicit words of the patent."

On the basis of this "plain and unartificial" (A. 30) reading of the patent claims, the Court held the claims not infringed.*

Having found that the accused antishock bodies were not encompassed by the patent claims, the Court went on to consider whether or not the claims could be stretched by

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*The District Court's finding of "literal infringement" to which petitioner repeatedly refers (petition, pp. 7-8, 8, 24n) was clearly wrong. Additionally, it was infected by the fact that it was based upon Finding of Fact 32 (114a), as originally entered by the District Court, which stated that the accused antishock bodies were located such that their noses were extending "forward"—not "just forward"—of the wing panel region of maximum thickness.

True or not, this finding of fact had no bearing on whether or not devices with noses "forward" infringe claims which required that the noses extend "just forward". Recognizing the infirmity of original Finding 32 without the word "just" in it, petitioner's counsel contacted the Court's chambers *ex parte* and caused Finding 32 to be altered by the addtion of the word "just" (108a-109a, 117a-118a, 121a).

Finding 32, as thus modified by petitioner's counsel, was found by the Court of Appeals to be clearly erroneous (A. 29).

application of the doctrine of equivalents to include them. It concluded that the claims could not be enlarged by such turning and twisting because (1) the patentee had made the special position of the nose "of the essence of the invention" (A. 31), and (2) the 4 feet forward position was superior in performance to, and thus not in fact equivalent to, the claimed "just forward" nose position.

Reasons for Denying the Writ

1. The Holding of Non-Infringement Below Was Manifestly Correct

Inquiring into the question of infringement in this case, the Court of Appeals compared the language of the patent claims with the allegedly infringing devices. It observed that the claims require the patented antishock bodies to extend "just foward" of the wing panel region of maximum thickness, and found that the allegedly infringing antishock bodies—which extend 4 feet forward—are beyond the scope of the claims. Based on this anlysis, the Court found that there was no infringement of the literal terms of the patent claims.

In thus reasoning, the Court of Appeals was applying the fundamental principle, repeatedly referred to and endorsed by this Court, that the patent claim is the measure of the grant to the patentee, *Paper Bag Patent Case*, 210 U. S. 405, 419 (1908); *Milcor Steel Co.* v. *Fuller Co.*, 316 U. S. 143, 145-6 (1942); *Marconi Wireless Co.* v. *U. S.*, 320 U. S. 1 (1943); *Universal Oil Co.*, v. *Globe Co.*, 322 U. S. 471, 485 (1944):

> "The claim is the measure of the grant. *Smith* v. *Snow*, 294 U. S. 1, 11. The claim is required to be specific for the very purpose of protecting the public against extension of the scope of the patent.

White v. *Dunbar,* 119 U. S. 47, 52; *Minerals Separation* v. *Butte Mining Co.,* 250 U. S. 336, 347; . . ."

Minerals Separation v. *Butte Mining Co.,* 250 U. S. 336, 347 (1919):

> "And of these this court has said in *Keystone Bridge Co.* v. *Phoenix Iron Co.,* 95 U. S. 274, 278:
>
> > 'But the courts have no right to enlarge a patent beyond the scope of its claim as allowed by the Patent Office. . . . As patents are procured *ex parte,* the public is not bound by them, but the patentees are. And the latter cannot show that their invention is broader than the terms of their claim: or, if broader, they must be held to have surrendered the surplus to the public.'
>
> "And in *White* v. *Dunbar,* 119 U. S. 47, 52:
>
> > 'The claim is a statutory requirement, prescribed for the very purpose of making the patentee define precisely what his invention is; and it is unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms.' "

The Court of Appeals was also applying settled doctrine when it went on to hold that in the circumstances of this case petitioner was precluded from invoking the doctrine of equivalents to contort the plain language of his claims. Again, the decisions of this Court are clear. A patentee who has made form of the essence (*Winans* v. *Denmead,* 56 U. S. (15 Howard) 330, 342 (1854); *Machine Co.* v. *Murphy,* 97 U. S. (7 Otto) 120, 125 (1877); and *Sanitary Refrig'r Co.* v. *Winters,* 280 U. S. 30, 42 (1929)) cannot later deny that form and shape weigh importantly in the balance when considering the range of equivalents to which his patent may be entitled.

Struggling to avoid the rule of these cases petitioner makes the naked assertion, unsupported by any citation to the record, that form is not of the essence here (petition, p. 27). But it is perfectly clear that the specific location of the patented antishock bodies was of the essence. Indeed, it was the specific location which provided the very basis upon which the Patent Office was persuaded to allow the claims in suit.

The record in this case expunges any doubt that the "invention" of Whitcomb's patent was specially positioning the antishock bodies. Whitcomb's first experiments were conducted with already-existing low-drag wing bodies (Mattson, Tr 688a). With such low-drag wing bodies in the prior art, Whitcomb was hard-pressed to claim any contribution over them. He knew it, so in describing his alleged invention, he claimed that his contribution was only in the "special positioning" of such bodies on the wing.

In the first written disclosure of his idea (GD-1, 703a), Whitcomb said that the "*unique feature* of the present invention is the *special positioning* of added bodies on a wing . . ."* Later testing led Whitcomb to write an amplified disclosure where he wrote (1240a):

> "The noses of the bodies 4 are *just ahead of* the maximum thicknesses 5 of the local [wing] sections . . ."

Again, in this amplified disclosure, which precisely located the noses of the antishock bodies, Whitcomb noted that "The *unique feature* of the present invention is the *special positioning* of a group of small added bodies on a wing" (1241a). When his patent application was given to him for review before filing, Whitcomb himself changed it to fix the position of the nose of the antishock bodies as "just

*Emphasis ours throughout.

ahead of" the maximum thickness of the wing section (W-108, 1245a).

Whitcomb's change was carried forward into the patent (A. 35) in col. 1, ll. 36-38. Elsewhere in the patent it is likewise made clear that "The noses 4 of the bodies 1 are near or just ahead of the local wing sections" (A. 35, col. 2, ll. 31-32).

As originally filed, Whitcomb's patent application included claims broad enough to encompass an antishock body located anywhere on the wing (GD-6, 759a). In the face of prior art cited by the Examiner, Whitcomb cancelled all broad claims from his patent application (GD-6, 765a). Thereafter, the claims which issued as the patent claims in suit (760a) all contained the "just forward" limitation. In arguing for the allowance of claims thus limited, Whitcomb urged the specific positioning as critically important.

He acknowledged that a cited Northrop patent showed elongate bodies on the upper wing surface, but pointed out (GD-6, 771a):

> "[T]here is no teaching in this reference that the noses of these components extend *just forward* of the maximum cross section wing panel region . . ."

He then went on to distinguish the Northrop reference on the basis of "these positively recited limitations" (771a).

On familiar principles of file wrapper estoppel Whitcomb's abandonment of broad claims and acceptance of only narrow claims limited to specific positions, coupled with his arguments to the Patent Office urging that specific positions were the basis for patentability, prohibit him from now urging successfully that his claims include devices not so positioned, *I. T. S. Co.* v. *Essex Co.*, 272 U. S. 429, 443, 444 (1926); *Smith* v. *Magic City Club*, 282 U. S. 784, 789-90 (1931); *Exhibit Supply Co.* v. *Ace Corp.*, 315 U. S. 126,

136-137 (1942); and *Graham* v. *John Deere Co.*, 383 U. S. 1, 33 (1966):

> "Claims as allowed must be read and interpreted with reference to rejected ones and to the state of the prior art; and claims that have been narrowed in order to obtain the issuance of a patent by distinguishing the prior art cannot be sustained to cover that which was previously by limitation eliminated from the patent. *Powers-Kennedy Co.* v. *Concrete Co.*, 282 U. S. 175, 185-186 (1930); *Schriber Co.* v. *Cleveland Trust Co.*, 311 U. S. 211, 220-221 (1940)."

All of Whitcomb's writings to which reference has just been made—and his patent and its Patent Office history as well—establish that Whitcomb viewed the "just forward" position as of paramount importance. The Patent Office allowed the claims in suit on the basis of limitations to the "just forward" position. These facts make it plain that form, and the "just forward" location, are of the essence in Whitcomb's alleged invention.

With specific location so clearly established as critical and with Whitcomb unable to point to a single fact or circumstance which suggests that it was not, the Court of Appeals was entirely correct in concluding, on the basis of the controlling decisions in this Court, that "this is a case where form and shape are of the essence of the invention" and a case in which "differences in form and shape may weigh importantly in the balance" (A. 31).

These considerations buttress the holding of noninfringement which flows inevitably from the fundamental fact that the claims in suit do not read upon the allegedly infringing antishock bodies.

Casting about to create an aura of public importance which might induce this Court to review this case, petitioner attempts to conjure up a conflict between the decision here and decisions of other Courts of Appeals. The petition goes on at inordinate length (petition, pp. 11-18) citing decisions in this Court and of Courts of Appeals, which say a device that follows the teaching of a patent cannot avoid infringement of that patent simply because it improves or adds to the effectiveness of the patented structure.

We have no quarrel with the rule, and the decision of the Court of Appeals here in no way conflicts with it. The Court of Appeals here compared the language of the patent claims in suit with the allegedly infringing structure, found they did not correspond, and therefore found non-infringement. This straightforward determination is in no way inconsistent with the rule that an accused device which falls within the claims of a patent may still be an infringement even though it might contribute some improvement over the patented device.

It is true that the 4 feet forward position which is specifically excluded from the claims is superior to the "just forward" position required by them. Whitcomb himself acknowledged the superiority of the far forward position (Whitcomb, 323a, 358a, 865a). But this is simply evidence of the very real difference between the "just forward" position required by the claims, and the superior and non-infringing 4 feet forward position of the accused devices.*

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*Petitioner contends (petition, pp. 3, 22) that the Court of Appeals' conclusion regarding the superiority of the accused devices was arrived at by erroneously comparing the accused devices with experimental research investigations of the patentee, instead of comparing the accused devices with the patent claims. The Court's opinion makes clear that it made the correct comparison (A. 31):

> ". . . wing bodies similar to the outboard bodies on the *General Dynamics planes* deal more successfully with the boundary layer separation problem than bodies fitting the precise description of *Whitcomb's claim 1*."

The Court of Appeals referred to it (A. 31) as evidence of this difference and as nothing more.

Finally, petitioner contends (petition, pp. 20-24) that the Court of Appeals' decision construes the Whitcomb patent so narrowly as to exclude its own illustrative embodiments. This tortured argument is based upon measurements Whitcomb himself made on Fig. 2 of the patent drawings (A. 33), after he had selected where he wanted to put the point of maximum wing thickness in that drawing (Whitcomb, 354a). A glance of Fig. 2 reveals that in that drawing one could arbitrarily put the wing's point of maximum thickness anywhere he wanted it to assure his desired result. Furthermore it is well-settled that patent drawings do not even purport to be scale drawings, *Otto* v. *Koppers Company,* 246 F. 2d 789, 797 (4 Cir. 1957):

> ". . . the proportions shown in the diagrammatic drawings [patent drawings] are not critical and they do not purport to be scale or working drawings."

Petitioner's self-serving measurements made from a non-scale drawing can have no force in the face of the repeated statements in his patent and elsewhere, *supra,* pp. 9-11, to the effect that the noses of his antishock bodies must be "just forward" of the wing panel region of maximum thickness, and to the effect that the "just forward" location is critical.

2. There Is No Conflict of Decisions and No Question of Public Importance Is Presented

No other suit has been brought on the Whitcomb patent. Thus, there is no decision on the same matter in conflict with the decision of the Court of Appeals for the Fourth Circuit, here sought to be reviewed.

This case is nothing more than a private patent controversy. No domestic airplane other than the Convair

990 ever used antishock bodies, and the 990 was a widely publicized financial failure (GD-39, 912a). The Whitcomb patent is plainly not a patent of unusual public importance. Apposite here is the rule stated in *Keller* v. *Adams-Campbell Co.*, 264 U. S. 314, 319 (1924):

> ". . . Such an ordinary patent case with the usual issues of invention, breadth of claims and non-infringement, this Court will not bring here by certiorari unless it be necessary to reconcile decisions of the Circuit Court of Appeals on the same patent."

The record here does not present any substantial question of Federal law requiring resolution by this Court. The finding below of non-infringement is fully supported by the facts which make clear that the accused antishock bodies are beyond the scope of the patent claims, and it is perfectly in accord with the decisions of this Court.

Conclusion

The petition should be denied.

Respectively submitted,

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